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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,549	02/12/2002	Robert J. Sinaiko	SHPR-01041USR SRM	6755

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FLIESLER MEYER, LLP
FOUR EMBARCADERO CENTER
SUITE 400
SAN FRANCISCO, CA 94111

EXAMINER	
TRAN, THAO T	

ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 05/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AS

Office Action Summary	Application No.	Applicant(s)	
	10/074,549	SINAIKO ET AL.	
	Examiner	Art Unit	
	Thao T. Tran	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 February 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-73* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-73* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/26/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This is in response to the Amendments received on February 26, 2004. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

2. Claims 1-73 are currently pending in this application. Claims 71-73 have been newly added.

Drawings

3. In view of the prior Office action of October 24, 2003, the objection of Figures 11A-D has been withdrawn due to further consideration.

Claim Objections

4. In view of the prior Office action of October 24, 2003, the objection of claims 16-17, 23-54, 66 has been withdrawn due to Amendments made thereto.

Claim Rejections - 35 USC § 112

5. In view of the prior Office action of October 24, 2003, the rejection of claims 45-64, under 35 U.S.C. 112, second paragraph, has been withdrawn due to Amendments made thereto.

Claim Rejections - 35 USC § 103

6. Claims 1-5, 8, 10, 14, 17-27, 29, 31, 35, 39-48, 51-59, 61-62, 65, 71-73, are rejected under 35 U.S.C. 103(a) as being unpatentable over Satyapal et al. (US Pat. 5,879,435).

Satyapal teaches an electronic air cleaner 10, comprising a housing 20 having an air inlet 22; an air outlet 24; and an ion generator 40 (electrostatic cell) including ionizer wires 46 and collector plates 42; UV lights 50; the housing having a top, a bottom, and sides (see abstract; Figs. 2, 4).

In regards to claims 1-2, 23-24, although Satyapal does not teach a plurality of the air inlet, or the air outlet, or the ion generator, it would have been within the skill in the art that duplication of parts would have no patentable significance. See MPEP 2144.04, section VIB. Furthermore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified Satyapal's air cleaner such that it would have had a plurality of air inlets, air outlets, or ion generators, for the purpose of increasing the amount of ionized air and hence the air cleaning efficiency.

Moreover, the air inlet and air outlet of Satyapal are large, and the ion generator of Satyapal contains many electrodes, these structures would work equally well as those in the presently claimed invention.

In regards to claims 3, 20-22, 25, 42-44, 52-54, 65, Satyapal teaches the collector electrodes being plate electrodes (see abstract). However, it has been within the skill in the art that particular configurations of the electrodes would have been an obvious matter of design choice, depending upon user's preference and intended use. Furthermore, Applicants have not

disclosed the advantages of the electrodes having this particular configuration over other configurations. See MPEP 2144.04, section IVB.

In regards to claims 4-5, 8, 14, 17, 26-27, 29, 35, 39, 45, 48, 55-56, 71-73, Satyapal does not teach the inlets and the outlets are respectively located on opposing surfaces of the housing or that they are perpendicular to each other, or the location of the electrodes, or the ion generators, with respect to the inlets and the outlets. However, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, that the locations of the structures would have been an obvious matter of design choice. It has been known within the skill in the art that the airflow would be affected by many parameters, such as the position, shape, length of the electrodes, or other elements inside the ion generator. And depending on such parameters that the air inlets and air outlets would be configured in order to optimize the amount of ions in the airflow. Moreover, the air inlets, air outlets, the electrodes, or the ion generators would work equally well as taught by Satyapal.

In regards to claims 10, 31, 47, 58-59, it has been settled within the skill in the art that the manner of operation, intended use, or how the product is made, would have insignificant patentable weight when an apparatus claim is being considered. See MPEP 2114.

In regards to claims 18-19, 40-41, 51, 57, Satyapal teaches UV lights upstream of the ion generator (see col. 4, ln. 47-50).

In regards to claims 46, 61-62, Satyapal teaches the inlet and the outlet cover substantially all of the sides of the housing (see Figs. 2,4).

7. Claims 6, 11-13, 28, 32-34, 66-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Satyapal as applied to claims 1, 23, 45, 55, 65 above, and further in view of Moon (US Pat. 5,215,558).

Satyapal is as set forth in claims 1, 23, 45, 55, and 65 above and incorporated herein.

Satyapal does not teach the use of a focus or a trailing electrode in the ion generator.

Moon teaches the use of ionizing, collector, auxiliary, and accelerating electrodes (see Fig. 1). The auxiliary electrodes (focus electrodes) are between the ionizing and collector electrodes, whereas the accelerating electrodes (trailing electrodes) are at the end of the collector electrodes.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have included the focus and trailing electrodes, as taught by Moon, into the apparatus of Satyapal. It has been known in the art that the focus electrodes are to strengthen the electric field, and the trailing electrodes to enhance effectiveness of dust collection. With respect to the location of the focus and trailing electrodes, it has been within the skill in the art that locations of would have been an obvious matter of design choice. The electrodes would work equally well as taught by Moon, and Applicants have not disclosed the advantages of these particular locations of the inlets, the outlets, the electrodes, or the ion generators over other locations.

8. Claims 7, 15-16, 36-38, 49-50, 60, 63-64, are rejected under 35 U.S.C. 103(a) as being unpatentable over Satyapal as applied to claims 1, 23, 45, 55 above, and further in view of Anzai (US Pat. 4,772,297).

Satyapal is as set forth in claims 1, 23, 45, and 55 above and incorporated herein.

Satyapal does not teach the air inlets and air outlets being covered by fins, or a control device located on the top surface of the housing.

Anzai teaches an air conditioner (air cleaner), comprising an upstanding, elongated housing A having a top surface and a control device (operation section C and sensor section D); an inlet B1 and an outlet B2 covered with fins (see abstract; Figs. 1-6; col. 2, ln. 41-45, 57-59; col. 3, ln. 41-60; col. 4, ln. 50-57).

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have included the fins covering the air inlets and air outlets, and a control device, as taught by Anzai, in the apparatus of Satyapal. Having fins covering the air inlets and air outlets would enable better control of the airflow into and out of the air conditioner; whereas having a control device would enable better control of the operation of the air conditioner.

Response to Arguments

9. Applicant's arguments filed February 26, 2004 have been fully considered but they are not persuasive.

Throughout the Remarks, Applicants contend that the prior art of record does not teach a plurality of the air inlets, air outlets, or the ion generators, and therefore, the references' apparatus does not have as much volume of air entering the housing and airflow through the air cleaner. However, as pointed out in the prior Office action and paragraph 7 above, it has been known within the skill in the art that mere duplication of parts would have no significant patentable weight. This is because it has been known that plurality of parts would increase the

capacity of the apparatus, and in this case, would increase the air cleaner's efficiency. See MPEP 2144.04 VIB.

With respect to how the air inlets and the air outlets are located with respect to each other, as pointed out in the prior Office action and paragraph 7 above, it has been known within the skill in the art that rearrangement of parts or how parts are positioned with respect to each other would have no significant patentable weight. Moreover, it has been known that depending on parameters, such as how the electrodes are positioned inside the housing, that the air inlets and outlets would have been designed accordingly in order to maximize the amount of ionized air to flow out of the air cleaner, thus maximizing the efficiency of the air cleaning process. See MPEP 2144.04 VIC.

With respect to the shape of the electrodes, it has been known within the skill in the art that particular configurations of the electrodes would have no significant patentable weight. It has been known that the capacity of the electrodes would depend upon parameters, such as their shape and length, and the voltage applied to them. The electrodes would be configured, such as to be longer and thinner, or bent, to have an increased surface area, thus increasing their capacity for the purpose of increasing the air cleaning efficiency. See MPEP 2144.04 IVB.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 8:30 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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May 5, 2004

James J. Seidleck
Supervisory Patent Examiner
Technology Center 1700